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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,864	10/30/2003	Kouichi Uesaka	500.43242X00	6688

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EXAMINER

AL NAZER, LEITH A

ART UNIT PAPER NUMBER

2821

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/695,864	<b>Applicant(s)</b> UESAKA ET AL.	
	<b>Examiner</b> Leith A. Al-Nazer	<b>Art Unit</b> 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-20 is/are rejected.
- 7) ☒ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2003 and 19 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10 November 2005</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 3 is objected to because of the following informalities:

Claim 3 currently depends from cancelled claim 2. For the purposes of examination, Examiner has assumed that dependent claim 3 depends on independent claim 1.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 3-9, and 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 17 recite the phrase "a phase difference" in lines 11 and 13, respectively. It is unclear whether or not this term is referring back to the previously recited "opposite-phase electric currents". Therefore, the claim as it now reads, is vague and indefinite.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 4-17, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,763,130 to Weinstein.

With respect to claims 10-12 and 13-16, Weinstein teaches a narrow-directivity antenna probe for performing the measurement of or the irradiation with an electric field or a magnetic field, comprising: a main antenna probe (10) for performing the measurement of or the irradiation with the electric field or the magnetic field, and at least one grounded-electric-potential conductive flat-plate (22) located in proximity to the main antenna probe in order to narrow the directionality of the main antenna probe.

With respect to claims 17, 4-9, and 20, Weinstein teaches a narrow-directivity antenna probe for performing the measurement of or the irradiation with an electric field or a magnetic field, comprising: a main antenna probe (10) for performing the measurement of or the irradiation with the electric field or the magnetic field; and at least one member located in proximity to the main antenna probe in order to narrow the directionality of the main antenna probe, wherein the at least one member is at least one of at least two directionality-adjusting antenna probes and at least one grounded-electric-potential conductive flat-plate (22); wherein the directionality-adjusting antenna probes are fed with opposite-phase electric currents with respect to the phase of the

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electric current fed to the main antenna probe, and a phase difference between the main antenna probe and the directionality-adjusting antenna probes in a range of  $\pi \pm \pi/2$  rad.

With respect to claim 19, Weinstein teaches only the at least one grounded-electric-potential conductive flat plate (22).

6. Claims 4-17, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,301,457 to Bogner.

With respect to claims 10 and 13-16, Bogner teaches a narrow-directivity antenna probe for performing the measurement of or the irradiation with an electric field or a magnetic field, comprising: a main antenna probe (14) for performing the measurement of or the irradiation with the electric field or the magnetic field, and at least one grounded-electric-potential conductive flat-plate (32) located in proximity to the main antenna probe in order to narrow the directionality of the main antenna probe.

With respect to claim 11, Bogner teaches at least two of the grounded-electric-potential conductive flat-plates being provided (figure 1).

With respect to claim 12, Bogner teaches the grounded-electric potential conductor flat-plates being located in proximity to the main antenna probe in a symmetric arrangement (figure 1).

With respect to claims 17, 4-9, and 20, Bogner teaches a narrow-directivity antenna probe for performing the measurement of or the irradiation with an electric field or a magnetic field, comprising: a main antenna probe (14) for performing the

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measurement of or the irradiation with the electric field or the magnetic field; and at least one member located in proximity to the main antenna probe in order to narrow the directionality of the main antenna probe, wherein the at least one member is at least one of at least two directionality-adjusting antenna probes and at least one grounded-electric-potential conductive flat-plate (32); wherein the directionality-adjusting antenna probes are fed with opposite-phase electric currents with respect to the phase of the electric current fed to the main antenna probe, and a phase difference between the main antenna probe and the directionality-adjusting antenna probes in a range of  $\pi \pm \pi/2$  rad.

With respect to claim 19, Bogner teaches only the at least one grounded-electric-potential conductive flat plate (figure 1).

7. Claims 4-17, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,127,987 to Maruyama et al.

With respect to claims 10 and 13-16, Maruyama teaches a narrow-directivity antenna probe for performing the measurement of or the irradiation with an electric field or a magnetic field, comprising: a main antenna probe (8) for performing the measurement of or the irradiation with the electric field or the magnetic field, and at least one grounded-electric-potential conductive flat-plate (4a and 14) located in proximity to the main antenna probe in order to narrow the directionality of the main antenna probe.

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With respect to claim 11, Maruyama teaches at least two of the grounded-electric-potential conductive flat-plates being provided (figures 5A and 5B).

With respect to claim 12, Maruyama teaches the grounded-electric potential conductor flat-plates being located in proximity to the main antenna probe in a symmetric arrangement (figures 5A and 5B).

With respect to claims 17, 4-9, and 20, Maruyama teaches a narrow-directivity antenna probe for performing the measurement of or the irradiation with an electric field or a magnetic field, comprising: a main antenna probe (8) for performing the measurement of or the irradiation with the electric field or the magnetic field; and at least one member located in proximity to the main antenna probe in order to narrow the directionality of the main antenna probe, wherein the at least one member is at least one of at least two directionality-adjusting antenna probes and at least one grounded-electric-potential conductive flat-plate (4a and 14); wherein the directionality-adjusting antenna probes are fed with opposite-phase electric currents with respect to the phase of the electric current fed to the main antenna probe, and a phase difference between the main antenna probe and the directionality-adjusting antenna probes in a range of  $\pi \pm \pi/2$  rad.

With respect to claim 19, Maruyama teaches teaches only the at least one grounded-electric-potential conductive flat plate (figures 5A and 5B).

***Allowable Subject Matter***

8. Claim 1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

9. Claim 18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to teach or suggest one or more of the limitations found in independent claim 1 and dependent claim 18. With respect to independent claim 1 and dependent claim 18, the prior art of record fails to teach or suggest at least two or more directionality-adjusting antenna probes located in proximity to the main antenna probe in order to narrow the directionality of the main antenna probe; wherein the directionality-adjusting antenna probes are fed with opposite-phase electric currents with respect to the phase of the electric current fed to the main antenna probe, and a phase difference between the main antenna probe and the directionality-adjusting antenna probes in a range of  $\pi \pm \pi/2$  rad.



***Response to Arguments***

11. Applicant's arguments with respect to claims 4-20 have been considered but are moot in view of the new ground(s) of rejection.

***Citation of Pertinent References***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references further show the state of the art with respect to antenna devices with a main antenna and at least one grounded-electric-potential conductive flat-plate located in proximity to the main antenna probe:

- a. U.S. Patent No. 4,010,475 to James
- b. U.S. Patent No. 5,940,048 to Martek
- c. U.S. Patent No. 6,034,638 to Thiel et al.
- d. U.S. Patent No. 6,369,770 to Gothard et al.
- e. U.S. Patent No. 6,452,565 to Kingsley et al.
- f. U.S. Patent No. 6,696,834 to Kou et al.
- g. U.S. Patent Application Publication No. 2002/0132581 to Ichihara
- h. U.S. Patent Application Publication No. 2004/0114535 to Hoffmann et al.

***Communication Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leith A. Al-Nazer whose telephone number is 571-272-1938. The examiner can normally be reached on Monday-Friday, 7:30-4:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LA

*Shih-Chao Chen* 11/21/05  
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PRIMARY EXAMINER